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10/823,257	04/13/2004	Ramiro Quintero Illera	153454600017	3496

7590

02/23/2006

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EXAMINER

PHAN, THO GIA

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 23-24, 27-28, 30-31, 36-37 and 44-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Isohatala et al (6,366,243) [of record].

Isohatala et al in figures 8 disclose a second conducting portion electromagnetically coupled to the first conducting portion, the first and second conducting portions defining a non-straight gap there between, and wherein the gap increases a resonant length of the antenna, but does not increase the outer dimensions of the antenna, a branching structure (i.e. fig.8a,8b,8f) having a main gap segment and at least one minor gap segment that extends from the main gap and the non-straight gap defines a curve having between two and nine segments (fig.8g,8h,8i), wherein the second conducting portion is shorter than the first conducting portion (fig.8a,8b,8c,8i), wherein a width of the non-straight gap is non- constant (fig.8f), and wherein the antenna comprises a multilevel structure and includes at least a first/second capacitive loads (column 3, lines 22-31) on the multilevel structure.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25-26, 29, 35 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isohatala et al in view of Applicant's prior art figure 2.

Isohatala et al have been discussed above and also disclose many different curves (see figure 8) but fail to teach a meandering/periodic curve and the conducting portions are electromagnetically coupled by means of capacitive coupling. However, Applicant's prior art figure 2 show the conducting portions 101,102 are electromagnetically coupled by means of capacitive coupling. It would have been obvious to provide Isohatala et al with the meandering/periodic curve and the conducting portions are electromagnetically coupled by means of capacitive coupling for the purpose of improving the antenna gain.

Isohatala et al fail to specifically teach the specific bands of operation as claimed. However, the specific bands of operation would have been obvious in the art. Antennas and their elements are routinely "frequency scaled" and thus claims limitations are obvious design choices of wide bandwidth and matching variation with frequency as of interest.

**Allowable Subject Matter**

4. Claims 1-4, 10-22 and 48-50 are allowed.
5. Claims 32-34, 38-39 and 46-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 12/1/05 have been fully considered but they are not persuasive.

Applicant argues that Isohatala et al fail to teach a first conducting portion and a second conducting portion electromagnetically coupled to each other as claimed. However, Examiner respectfully disagrees with Applicant's position, Isohatala et al in figure 8 disclose a second conducting portion/branch electromagnetically coupled to the first conducting portion/branch (column 3, lines 22-31 and column 3, lines 62+), the first and second conducting portions defining a non-straight gap there between, and wherein the gap increases a resonant length of the antenna, but does not increase the outer dimensions of the antenna (column 1, lines 53-55 and column 6, lines 4-26).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho G. Phan whose telephone number is 571-272-1826. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tho G Phan

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Primary Examiner  
Art Unit 2821